

K120546

JUN 13 2012

Toshiba America Medical Systems, Inc.  
Pre-Market Notification 510(k)  
TSX-301B Aquilion Premium w/4.74 Software

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**510(k) – SUMMARY OF SAFETY AND EFFECTIVENESS**

**1. SUBMITTER'S NAME:**

Toshiba America Medical Systems, Inc.

**2. ADDRESS:**

2441 Michelle Drive  
Tustin, CA. 92780-2068

**3. ESTABLISHMENT REGISTRATION:**

2020563

**4. CONTACT PERSON:**

Paul Biggins  
Director, Regulatory Affairs  
(714) 730-5000

**5. TRADE NAME(S):**

TSX-301B Aquilion Premium CT

**6. COMMON NAME:**

System, X-ray, Computed, Tomography

**7. DEVICE CLASSIFICATION:**

Class II (per 21 CFR 892.1750)

**8. PRODUCT CODE / DESCRIPTION:**

JAK – System, Computed Tomography

**9. PERFORMANCE STANDARD:**

21 CFR Subchapter J, Federal Diagnostic X-ray Equipment Standard

**10. PREDICATE DEVICE:**

TSX-301B-K083282

**11. REASON FOR SUBMISSION:**

Modification of a cleared device

**12. DEVICE DESCRIPTION:**

The TSX-301B is a whole body CT scanner. This device captures cross sectional volume data sets. The device consists of a gantry, patient couch (table) and peripheral cabinets used for data processing and display.

### **13. SUMMARY OF INTENDED USES:**

This device is indicated to acquire and display cross sectional volumes of the whole body, to include the head, with the capability to image whole organs in a single rotation. Whole organs include but are not limited to brain, heart, pancreas, etc.

The Aquilion has the capability to provide volume sets of the entire organ. These volume sets can be used to perform specialized studies, using indicated software/hardware, of the whole organ by a trained and qualified physician.

### **14. SUBSTANTIAL EQUIVALENCE:**

The modification to this device is to reduce radiation exposure to the patient. The modification allows for the use of an iterative reconstruction algorithm that provides the user the ability to perform scans at lower doses. The materials, hardware, method of operation, base software and manufacturing processes remain unchanged from the cleared device; TSX301B (k083282).

### **15. SAFETY:**

The device is designed and manufactured under the Quality System Regulations as outlined in 21 CFR § 820 and ISO 13485 Standards. This device is in conformance with the applicable parts of the IEC60601-1 standards and its collateral standards. All requirements of the Federal Diagnostic Equipment Standard, as outlined in 21 CFR §1020, that apply to this device, will be met and reported via product report.

### **16. TESTING**

The testing conducted on this device utilized phantoms and accepted image quality metrics. The results of this testing is included in the user information.

### **17. CONCLUSION**

The additional features that are being added to the Aquilion Premium at this time do not change the indication for use or the intended use of the device. Safety and effectiveness have been verified via risk management and application of design controls to this modification.



## DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room – WO66-G609  
Silver Spring, MD 20993-0002

Toshiba Medical Systems Corporation, Japan  
% Mr. Paul Biggins  
Director Regulatory Affairs/US Agent  
Toshiba America Medical Systems, Inc.  
2441 Michelle Drive  
TUSTIN CA 92780

JUN 13 2012

Re: K120546

Trade/Device Name: TSX-301B, Aquilion Premium CT System  
Regulation Number: 21 CFR 892.1750  
Regulation Name: Computed tomography x-ray system  
Regulatory Class: II  
Product Code: JAK  
Dated: May 15, 2012  
Received: May 16, 2012

Dear Mr. Biggins:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into class II (Special Controls), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

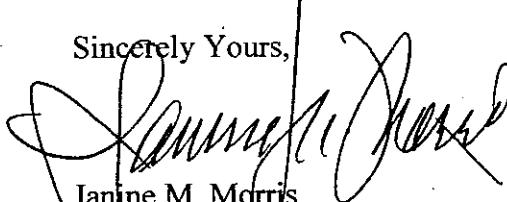
Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); medical device reporting (reporting of

medical device-related adverse events) (21 CFR 803); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820). This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Parts 801 and 809), please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 796-5450. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely Yours,



Janine M. Morris  
Acting Director  
Division of Radiological Devices  
Office of In Vitro Diagnostic Device  
Evaluation and Safety  
Center for Devices and Radiological Health

Enclosure

## Indications for Use Form

510(k) Number (if known): K120546

Device Name: TSX-301B, Aquilion Premium CT System

### Indications for Use:

This device is indicated to acquire and display cross sectional volumes of the whole body, to include the head, with the capability to image whole organs in a single rotation. Whole organs include but are not limited to brain, heart, pancreas, etc.

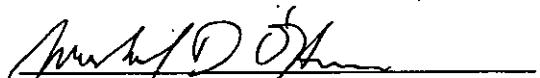
The Aquilion has the capability to provide volume sets of the entire organ. These volume sets can be used to perform specialized studies, using indicated software/hardware, of the whole organ by a trained and qualified physician.

Prescription Use  AND/OR Over-The-Counter Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF NEEDED)

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Concurrence of CDRH, Office of In Vitro Diagnostic Devices (OIVD)

  
Division Sign-Off  
Office of In Vitro Diagnostic Device  
Evaluation and Safety

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